REMARKS

Claims 1-21 were previously pending in this patent application. Claims 1-21 stand rejected. Herein, Claims 3, 11, and 19 have been cancelled. Moreover, Claims 1, 10, and 17 have been amended. Accordingly, after this Amendment and Response, Claims 1-2, 4-10, 12-18, and 20-21 remain pending in this patent application. Further examination and reconsideration in view of the claim amendments and arguments set forth below is respectfully requested.

35 U.S.C. Section 102(e) Rejections

Claims 1-3 stand rejected under 35 U.S.C. 102(e) as being anticipated by Snyder et al., U.S. Patent No. 6,724,220 (hereafter Snyder). These rejections are respectfully traversed.

Independent Claim 1 recites:

> A circuit comprising: a bus for communicating data; a microprocessor for processing data, said microprocessor coupled to said bus; a programmable functional component coupled to said bus, wherein said programmable functional component includes a plurality of functional blocks programmable to provide of functions and configurations; a memory for storing data including information associated with said functions and configurations, said memory coupled to said bus; and ***a programmably configurable external communication por***t for communicatively coupling with ***external devices relative to said circuit***. (emphasis added)

It is respectfully asserted that Snyder does not disclose the present invention as recited in Independent Claim 1. In particular, the Office action (at

page 3) cites Figure 1 and Col. 5, lines 48-59, as disclosing a programmably configurable external communication port for communicatively coupling with external devices. However, Figure 1 and Col. 5, lines 48-59, simply describe an Internal I/O Bus (127), an Internal Address/Data Bus (130), and a General Purpose I/O unit (124). Snyder (including Figure 1 and Col. 5, lines 48-59) fails to disclose a programmably configurable external communication port for communicatively coupling with external devices relative to the circuit.

Furthermore, Snyder states that analog signals (from external devices relative to the semiconductor chip) are coupled to the semiconductor chip at port 0 (212), which consists of four input pins (210) and four output pins (211). [Snyder; Col. 5, line 67 through Col. 6, line 2]. Also, Snyder states that digital signals (from external devices relative to the semiconductor chip) are coupled to the semiconductor chip by means of forty individual pins, which form ports 0 through 4 (241). [Snyder; Col. 6, lines 39-41]. Hence, ports (212) and (241) have fixed functionality instead of being programmably configurable.

Unlike Snyder, Independent Claim 1 is directed to a circuit. The circuit comprises a bus, a microprocessor, a programmable functional component, and a memory. Further, the circuit includes a programmably configurable external communication port for communicatively coupling with external devices relative to the circuit. While Snyder is directed to ports having fixed functionality,

Independent Claim 1 is directed to programmably configurable external communication port for communicatively coupling with external devices relative to the circuit. Therefore, it is respectfully submitted that Independent Claim 1 is not anticipated by Snyder and is in condition for allowance.

Dependent Claim 2 is dependent on allowable Independent Claim 1, which is allowable over Snyder. Hence, it is respectfully submitted that Dependent Claim 2 is patentable over Snyder for the reasons discussed above. Claim 3 has been cancelled.

Claims 10-21 stand rejected under 35 U.S.C. 102(e) as being anticipated by Hanna, U.S. Patent No. 6,542,844 (hereafter Hanna). These rejections are respectfully traversed.

Independent Claim 10 recites:

> An electronic device dynamic configuration method comprising: loading a plurality of configuration images into a memory of said electronic device; configuring said electronic device in accordance with a first configuration image; performing functions in accordance with said first configuration image; automatically reconfiguring said electronic device in accordance with a second configuration image; and executing functions in accordance with said second configuration image, wherein said automatically reconfiguring of said electronic device in accordance with said second configuration image is performed in response to a predetermined condition or event. (emphasis added)

It is respectfully asserted that Hanna does not disclose the present invention as recited in Independent Claim 10. In particular, the Office action (at page 4) cites Col. 3, lines 16-43, as disclosing that reconfiguration of the electronic device in accordance with a second configuration image is performed in response to a predetermined condition or event. However, Col. 3, lines 16-43, simply describes a PCI Interface FPGA (31) configured at startup by Configuration ROM (32). Further, This citation describes a FPGA (33) configured by configuration image data sent to PCI Interface (31) by processor (23A) or 23(B). When configured, the FPGA (33) contains Test Circuit (35) as well as functional circuits such as Raster Controller (34). Here, the PCI Interface FPGA (31) and the FPGA (33) are configured once and are not automatically reconfigured in response to a predetermined condition or event. Hanna (including Col. 3, lines 16-43) fails to disclose that the step of automatically reconfiguring of the electronic device in accordance with the second configuration image is performed in response to a predetermined condition or event.

Furthermore, Hanna states that a user or software program selects a trace format (debug level) for output. [Hanna; Col. 4, lines 66-67]. A logic configuration for the FPGA (33) is selected in conformity with the trace format and the logic configuration is loaded into the FPGA (33). [Hanna; Col. 4, line 67 through Col. 5, line 2]. However, No conditions or events are described that cause automatic reconfiguration of the FPGA (33). Hence, the FPGA (33) is

configured in conformity with the trace format but is not automatically reconfigured in response to a predetermined condition or event.

Unlike Hanna, Independent Claim 10 is directed to an electronic device dynamic configuration method. The method comprises configuring the electronic device in accordance with a first configuration image and performing functions in accordance with the first configuration image. Further, the method includes automatically reconfiguring the electronic device in accordance with a second configuration image and executing functions in accordance with the second configuration image. The automatically reconfiguring of the electronic device in accordance with the second configuration image is performed in response to a predetermined condition or event. While Hanna is directed to configuring and then executing functions based on a first configuration image, Independent Claim 10 is directed to automatically reconfiguring the electronic device in accordance with a second configuration image and executing functions in accordance with the second configuration image, wherein the automatically reconfiguring of the electronic device in accordance with the second configuration image is performed in response to a predetermined condition or event. Therefore, it is respectfully submitted that Independent Claim 10 is not anticipated by Hanna and is in condition for allowance.

Dependent Claims 12-16 are dependent on allowable Independent Claim 10, which is allowable over Hanna. Hence, it is respectfully submitted that Dependent Claims 12-16 are patentable over Hanna for the reasons discussed above. Claim 11 has been cancelled.

With respect to Independent Claim 17, it is respectfully submitted that Independent Claim 17 recites similar limitations as in Independent Claim 10. In particular, the method of programming an electronic device of Independent Claim 17 includes making the first configuration image active in the electronic device to realize the first circuit design system in the electronic device. Further, the method includes, in response to a condition, automatically making the second configuration image active in the electronic device to dynamically realize the second circuit design system in the electronic device. Therefore, Independent Claim 17 is allowable over Hanna for reasons discussed in connection with Independent Claim 10.

Dependent Claims 18 and 20-21 are dependent on allowable Independent Claim 17, which is allowable over Hanna. Hence, it is respectfully submitted that Dependent Claims 18 and 20-21 are patentable over Hanna for the reasons discussed above. Claim 19 has been cancelled.

35 U.S.C. Section 103(a) Rejections

Claims 4-9 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Snyder et al., U.S. Patent No. 6,724,220 (hereafter Snyder) in view of Hanna, U.S. Patent No. 6,542,844 (hereafter Hanna). These rejections are respectfully traversed.

Dependent Claims 4-9 are dependent on allowable Independent Claim 1, which is allowable over Snyder. Moreover, Hanna does not disclose a circuit comprising a programmably configurable external communication port for communicatively coupling with external devices relative to the circuit, as recited in Claim 1. Hence, it is respectfully submitted that Dependent Claims 4-9 are patentable over Snyder and Hanna for the reasons discussed above.

CONCLUSION

It is respectfully submitted that the above arguments and remarks overcome all rejections. For at least the above-presented reasons, it is respectfully submitted that all remaining claims (Claims 1-2, 4-10, 12-18, and 20-21) are now in condition for allowance.

The Examiner is urged to contact Applicants' undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

Please charge any additional fees or apply any credits to our PTO deposit account number: 23-0085.

Respectfully submitted,

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